JET Meeting Minutes
April 15, 2008

I. Participants

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Action Items

1. Joe Burrescia will send the URL for the report from the ESnet workshop.
2. If you expect to have SC08 demonstrations and need waves from Internet2Net, please contact Chris Robb at: chrobb@internet2.edu
3. Randy Vickers or another DHS representative will give a presentation on TICs at the Joint Techs meeting.

Proceedings

This meeting of the JET was coordinated by Paul Love of the NCO.

Network and Exchange Point Roundtable

Internet2Net

Internet2Net is getting additional power and racks to support ESnet's SDN. Level 3 is providing the racks and power. The New York PoP is the most difficult upgrade. The Charlotte PoP is being upgraded to be an Add/Drop node with the addition of Ciena equipment. The Level 3 component in Charlotte is expected to be operational at the end of May. The IP backbones have been upgraded. Juniper upgrades have been enabled. Some data collection issues have been resolved. Pacific Northwest GigaPoP will implement Ciena capability by late summer, concurrent with the move into a new space at the Westin Building.

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MANLAN

MANLAN is implementing an HDXc upgrade over the next 30 days to enable several applications. They require Nortel upgrades to the software. The Internet2Net link between London and New York is provided by Global Crossing. That circuit will be moving to a Level 3 circuit.

DREN

DREN is implementing DOJ sites. These, along with some existing higher bandwidth sites will use AES encryption. DREN demonstrated tagging to the Internet at large in support of IPv6. The pointing issues for DNS/IPv6 have been fixed.

ESnet

Bill Johnston is retiring from ESnet. A replacement is being sought for the June time frame. ESnet is purchasing switches for its next-generation deployment. The rollout of SDN will be starting shortly. Connectivity to the Princeton Plasma Physics Laboratory is on-track via dark-fiber connectivity to Philadelphia that is being shard with NOAA.

NISN

NISN is working on responding to the data call for the TIC spreadsheet. They have submitted a service request to change the OSPF costing across interfaces including San Jose, Chicago, Dallas, and Ashburn, Virginia. They are moving off of Time-Warner to Sprint. Their StarLight and NGIX-East peering have been expanded. They will soon upgrade their backbone from OC-48 to OC-192. NISN is providing GigE connectivity to the Naval Observatory to support the eVLBI application. The NISN vLAN to GEANT and Renateur terminates in Toulouse. NISN MAE-East and MAE-West terminations will be discontinued. NISN is considering equipments to support multicasting experiments with Internet2Net.

NOAA

The dark fiber connection to the GFDL at Princeton, shared with ESnet, looks promising

NREN

NREN is implementing a tie-in to the NISN network.

NIH

NIH is responding to the latest TIC data call. They are joining MREN.

AmPath

Two vLANs out of Sao Paulo are being reconfigured into the IRNC to Amsterdam. They are testing Layer 2 connectivity. They are supporting the eVLBI demonstration connectivity of Arecibo to TERENA 8 using Atlantic Wave, StarLight and NetherLight transit. Puerto Rico has GigE ports for connection by AmPath. They share burst bandwidth of 622 Mbps. They are trying to improve this bandwidth.

The Interworkking Conference is being held in the first week of December in Miami Beach. Telcos and academic institutions will attend from the US, Latin American and Asian-Pacific communities.

NLR

NLR is upgrading its Phase 1 capacity from 40 10GE waves along its northern path and 30 10GE waves along its southern route to 160 10 GE waves and 130 10GE waves respectively. The 808s on the northern tier are being replaced. They may be keeping the 454s. Dynamic vLAN service is available; please see: ess@nlr.net. Layer 2 connectivity is popular. At Layer 3, new peering with NISN is being implemented.

StarLight

The vLAN to support Arecibo is waiting on the University of Puerto Rico leg. The vLAN for the Brazil connection is completed. They have implemented a link to the National Center for Data Mining. They have implemented new IPv6 peerings with CERNet and the French Telecom.

NGIX-West

55 South Market Street in San Jse is providing more floor space and extending their switching fabric to NGIX-West with a 10 GE lambda to 1360 Keifer. They are working with USGS to interconnect USGS facilities by fiber and microwave. NGIX-West is studying implementing a new telescope requirement. They want 40-50 Mbps but currently have 8 Mbps through HPWREN..

Pacific Northwest GigaPoP

California PWave is upgrading power in anticipation of growth. Discussions are ongoing with Internet2Net on co-location. PNWGP is nearing completion of discussions with commercial providers for peering with the science community. PWave is supporting videoconferencing from Seattle to Tokyomin partnership with the Seattle Science Foundation. They are implementing permanent vLANs for collaboration including the Arctic Region SuperComputer Center (ARSC) for applications. They are coordinating with NISN and DREN on connectivity issues.

ARIN Secondary Market for IPv4 addresses

A representative of ARIN will be addressing the JET next month on the development of policies for a secondary market for IPv4 addresses. They will also give an update on v4 address depletion and other issues.

Trusted Internet Connections (TICs)
The JET provided a revised White Paper on concerns of the research networks in implementing TIC requirements. The revisions addressed the need for low latency links in research networks.

Randy Vickers of DHS indicated that a key focus of the TICs is to reduce the number of Federal Internet connections. The architecture Committee is currently looking at how to assist small agencies to coordinate with larger agencies. Current emphasis is not focused on coordination among the larger agencies. A focus is on implementing security for the reduced number of connections to the Internet with Einstein monitoring this fiscal year. They are hoping to identify which agencies/sites will be a multi-service TIC for other agencies.

Point of Contact for implementing TICs and TIC requirements are Mike Kern and Josh Perket of DHS. Contact Randy Vickers: **Randal.Vickers@dhs.gov**

The architecture committee would like to deploy Einstein boxes now that would be good candidates for TIC connections. There will be SKIF requirements as part of the Einstein requirement but deployment of a TIC, through Phase 2, will not require implementing a SKIF. The SKIF will be a standard SKIF certification with an access list and key card entry. Only the room with the Einstein box will have to be SKIFed. A Security Operations Center (SOC) will be required, one covering all the TICs of an agency. Future phases will have to address the requirements of the science networks. Extended Einstein capabilities are being developed but if they are insufficient to meet the science network requirements deployment of a TIC is not likely to be required.

AI: Randy Vickers or another DHS representative will give a presentation on TICs at the Joint Techs meeting.

Upcoming Meetings

April 20-25 Internet2 Member's Meeting, Arlington, Virginia
May 29-30 NOAA sponsored Network Performance Workshop, Miami, FL
July 20-25 Joint Techs and ESCC, Lincoln, Nebraska
August, 2nd week: DREN Networkers Conference, San Diego, California
September 28-30 Networking Research Challenges Workshop (neé ONT-IV), Seattle Washington
October 1-2 GLIF Meeting, Seattle, Washington
December: The Interworkking Conference is being held in the first week of December in Miami Beach. Telcos and academic institutions will attend from the US, Latin American and Asian-Pacific communities

Future JET Meetings

May 20, 11:00-2:00, NSF, Room 1150
June17, 11:00-2:00, NSF, Room 1150
July 21, 8:15, Lincoln, Nebraska, concurrent with Joint Techs.